UNITED STATES
v.
CORNELIUS E. MANNIX

IBLA 79-294 Decided September 24, 1980

Appeal from a decision of Administrative Law Judge John R. Rampton, Jr., dismissing the Government contest of Peggy Ann I and Peggy Ann II lode mining claims. MT 31412.

Affirmed in part and vacated in part.

1. Administrative Procedure: Burden of Proof--Mining Claims: Determination of Validity--Rules of Practice: Appeals: Burden of Proof

   In a Government contest of a mining claim for which an application for patent has been filed, the Government assumes the burden of going forward with sufficient evidence to establish a prima facie case; the burden then shifts to the claimant to show by a preponderance of the evidence that the claims are valid. A claimant establishes the validity of his claims by a preponderance of the evidence where the claimant's witness, testifying to the validity of the contested claims, is found to be more credible.

2. Mining Claims: Generally--Mining Claims: Discovery--Mining Claims: Marketability

   In determining whether a claimant has made a discovery, the present costs of mining, removing, and marketing the minerals involved are properly considered.

3. Mining Claims: Location

   In the absence of a discovery on a surface outcrop of a vein and in the absence of a clearly exposed vein on the surface of the ground, a projection vertically upward to the surface from the discovery points shown

> on a mineral survey is acceptable to identify the center line of a lode claim for location purposes. Where a Government contest complaint against a mining claim charges that a mineral survey is improperly executed, the charge is properly dismissed.

APPEARANCES: Lawrence M. Jakub, Esq., Office of the General Counsel, U.S. Department of Agriculture, Missoula, Montana, for appellant; Paul T. Keller, Esq., Helena, Montana, for appellee.

OPINION BY ADMINISTRATIVE JUDGE HENRIQUES

On May 2, 1977, the Montana State Office, Bureau of Land Management (BLM), on behalf of the United States Forest Service, issued a complaint in contest MT 31412, United States v. Cornelius E. Mannix, involving the Peggy Ann I and the Peggy Ann II lode mining claims, Mineral Survey 10940, situated in the E 1/2 sec. 24, T. 13 N., R. 7 W., Principal meridian, Lewis and Clark County, Montana, within the Helena National Forest. The complaint charged:

> 1. No discovery of a valuable mineral deposit sufficient to support a mining location has been made upon or within the limits of the Peggy Ann I and Peggy Ann II claims.
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> 2. The lands within the limits of the Peggy Ann I and Peggy Ann II claims are nonmineral in character.
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> 3. The Peggy Ann I and Peggy Ann II claims have not been properly located, and mineral survey 10940 is improperly executed in that the actual lode line is located more than 300 feet from the SE sideline of both claims.

The contest arose after Mannix filed mineral patent application MT 31412.

Contestee denied the charges and the matter was heard by Administrative Law Judge John R. Rampton, Jr., on June 16, 1978, in Helena, Montana. In his decision of February 14, 1979, Judge Rampton dismissed the first two charges above, but sustained the charge relative to the improper location of the side lines of the claims and the improper execution of Mineral Survey 10940.

The Forest Service has appealed, charging error by Judge Rampton in ruling that a valuable mineral deposit is present on each claim, in concluding that the evidence supported a finding of discovery, in accepting the economic analysis and mining theory of the contestee's witness Johns as a basis for satisfying the objective standard required for the "prudent man test," and in concluding past expenditures on the claims are irrelevant as to whether a discovery has been established. The Forest Service contends the claimant did not sustain the burden of proof with a preponderance of the evidence and failed to

satisfy the prudent man test for each claim to support his request for a patent to the subject mining claims located on national forest lands.

In response, the claimant asks this Board to affirm the Judge's decision, asserting that the body of ore existing within the claims can be mined at a profit and that the record clearly establishes the validity of the claims by a preponderance of the evidence.

[1] All valuable mineral deposits in the public lands of the United States are open to exploration and purchase, 30 U.S.C. § 22 (1976), but the sine qua non for a valid mining location is discovery of a valuable mineral deposit within the limits of the claim. 30 U.S.C. § 23 (1976); Roberts v. Morton, 389 F. Supp. 87 (D. Colo. 1975), aff'd, 549 F.2d 158 (10th Cir. 1977), cert. denied, 434 U.S. 834 (1977).

A discovery exists where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine. Castle v. Womble, 19 L.D. 455, 457 (1894). This definition has been approved by the Supreme Court on many occasions, e.g., Chrisman v. Miller, 197 U.S. 313 (1905); Cole v. Ralph, 252 U.S. 286 (1920); Cameron v. United States, 252 U.S. 450 (1920); Best v. Humboldt Placer Mining Co., 371 U.S. 334 (1963); United States v. Coleman, 390 U.S. 599 (1968). Implicit in this condition is the requirement that the mineral material may be mined, removed, and marketed at a profit. In a case involving building stone, the Supreme Court held that the "marketability test is an admirable effort to identify with greater precision and objectivity the factors relevant to the determination that a mineral deposit is 'valuable.' It is a logical complement to the 'prudent man test.'" United States v. Coleman, supra at 602. Thereafter, the marketability test was deemed to be applicable to all mining claims and to be relevant where the discovery is of precious metals. Converse v. Udall, 399 F.2d 616, 621 (9th Cir. 1968).

Converse also held that the test relative to discovery should be strictly applied against the claimant in a contest involving mining claims in a national forest. Id. at 620.

It is well settled in a contest against a mining claim for which a patent application has been filed that the Government must make a prima facie case in support of its charges and that the burden then shifts to the claimant to show by a preponderance of the evidence that the claims are valid, even apart from the issues raised in the contest. Foster v. Seaton, 271 F.2d 836 (D.C. Cir. 1959). The Government has established a prima facie case of a lack of discovery when an expert witness testifies that he has examined the claim and has found the mineral value insufficient to support a finding of discovery. United States v. Tempest Mining Company, 40 IBLA 297 (1979).

Judge Rampton summarized the evidence and testimony accurately and succinctly in his decision, as follows:

> Two geologists, Robert Newman and James Whipple, testified for the Government. Both of them had examined the claims on several occasions: Newman on June 1-3, 1976, June 1 and June 13, 1978. Whipple examined the claims on September 25, 1973, in company with John Stentz, a Forest Service mineral examiner who has since retired, June 1-3, 1976, and June 13, 1978. Each testified in detail how the various examinations had been conducted, the extent of their examinations, the sampling methods used, location of samples taken, and the assay results of those samples. In addition, Mr. Newman presented testimony relative to the economic feasibility of operating the claims, which was agreed to by Mr. Whipple. They described the vein exposed by the workings as a single quartz vein extending almost entirely along the existing workings, offset numerous times by small shears or faults. At the face of the working the vein enters two or three feet of heavy fault gouge and Helena limestone. It cannot be determined without further exploration whether the vein terminates in the limestone or is merely displaced.
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> As a result of their examinations, each was of the opinion that a person of ordinary prudence would not be justified in the further expenditure of his labor and means with a reasonable prospect of success in developing a valuable mine on either of the claims. (Tr. 36, 73). This testimony, supported by the various assay reports submitted into evidence, was sufficient to establish the Government's prima facie case. United States v. Webb, 16 IBLA 345, 346 (1974).
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> Upon the establishment of the Government's prima facie case, the burden of proof shifted to the contestee to show by a preponderance of the evidence that the claims were in fact valid. Foster v. Seaton, 271 F.2d 836, 838 (D.C. Cir. 1959).
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> The contestee called two expert witnesses, Mr. Willis M. Johns, a mining engineer and geologist who visited the property on July 30, 1977, and again on August 22, 1977, and Mr. John F. Byrd, an independent mine operator, who has worked in the mines within the vicinity of the Peggy Ann claims since he was 12 years old and who has helped the Mannixes mine and ship the first shipment of ore that was sent to the East Helena Smelter.

Mr. Johns is the Chief of the Economic Geology Division of the Montana Bureau of Mines at Montana Tech. He has a B.S. and an M.S. in geology and has worked in various mines in Montana, Idaho and Arizona and has performed considerable sampling and testing for private organizations since his employment with the Montana Bureau of Mines. As a result of the sampling done by him, Mr. Johns identified within the workings a body of ore which he called Block 1 and stated that this ore could be removed at a profit. Eight samples were taken from across the vein in this block which averaged .37 oz. gold and 7.47 oz. silver. (Tr. 105). He computed that there were approximately 372 tons of ore in place within the block. (Tr. 115). After checking with the smelter in Helena, he computed the smelter charge at $10 per ton. Deducting two hundredths in gold which the smelter requires from the .37 and assuming 95% recovery, he reached a gold content of $63.55 per ton. On the basis of a 7.47 oz. showing of silver per ton and deducting 1 oz., which the smelter requires, he calculated a value for the silver content of $33.68 per ton. Although the vein contains copper and lead, the values were too low and no money would be paid by the smelter for these minerals. He calculated the crushing and delivery charges at $5 a ton, for a net smelter payment of $82.23 a ton. (Tr. 117). Haulage charges to the smelter at a rate of 20 cents a mile for a distance of 40 miles is $8 a ton. Powder, fuse, primers, electric power, assaying, and equipment rental came to $10.30 a ton, for a total mining and trucking cost of $18.30 per ton. The operator would receive a net of $63.83 per ton. The profit for 372 tons of ore would amount to $23,744. (Tr. 119).

Further, based upon his examination, but using geological inference only, it is his opinion that the block of ore probably extends below the adit level.

In determining that a commercial venture could be successful, he did not consider the expenditures made to date in the development of the claims.

Mr. Byrd, who helped the Mannixes mine and ship the first bulk sample which went to the East Helena Smelter, stated that the purpose was to find out the average quality of the ore. The ore was taken on the upper level and from his experience in the mines in that area, where there is a lead with a pitch to it and depth, there is usually a secondary enrichment. Better than 50% of the time, the lead or vein will widen out. In his opinion, a 100-foot shaft should be sunk within Block 1 and as the shaft is sunk and the mine is developed, the paying ore should be saved.

Both men were in agreement that selective mining methods would have to be used as the values along the vein vary. Mr. Byrd stated that qualitative samples could be taken by crushing and panning and has helped the contestee and his sons in learning that method.

One other expert witness testified for the contestee. Mr. Dale E. Scholz, who has a B.S. in geological engineering with a mining option and who visited the claims when they were being examined by the Forest Service personnel, testified as to a method of heap leaching of oxide gold. Under this method, the ore is placed on a impervious pad, sprayed with a diluted cyanide solution which dissolves the gold and silver. It is then processed to remove the clays and slimes and then into a de-aeration tower to remove the dissolved oxygen. Zinc dust is added, which replaces the gold and silver which precipitates and is collected into the filter presses. The overall recovery, he stated, is nearly 100% and the process works well with a small mine of 50 or 60 tons on each pad. Since the experts agree that the vein is highly shattered quartz with no clays, he stated the process would work very well in recovering gold and silver from the Peggy Ann claims and is cheaper than shipping the ore to a smelter. The transportation and smelter charges are therefore eliminated and the total cost of the materials used would be in the neighborhood of 80 cents per ton.

The testimony of Mr. Scholz as to the heap leaching process fails to shed much light on a determination of the validity of the claims. No testimony was given as to the cost of construction of the pads or the cost of the equipment necessary to use this process. Mr. Johns' economic analysis as to the profitability of mining the claims did not take into consideration the possible use of this process as compared to the cost of shipping and smelting at the East Helena Smelter, and as it stands, the evidence as to the feasibility of this method is too sketchy to make findings of fact on the economic viability of heap leaching on the ores from the claims in issue. The issue as to the validity of the claims then narrows down to whether the block of ore as defined and described by Mr. Johns constitutes a valid discovery on each claim.

All of the experts agree that the block straddles the two claims. The dividing line between the claims is at the raise from which Block 1 extends on both sides. All of the experts agreed that the others' sampling was performed properly and none questioned the qualifications of those who took the samples. There was some disagreement as to the average width of the exposed vein with

Mr. Newman estimating it as an average of 6 inches while Mr. Johns estimated the average width to be 12 inches. The values shown in the assays of the samples taken, however, varied widely.

Mr. Newman stated that samples 1, 2, 3, 4, 5 and 8, taken by him, were within or along the edge of Block 1 and the average value of these samples would be $8.38 per ton gold and $18.54 per ton silver, totalling $26.92. The samples taken in the 1973 Forest Service examination by Mr. John C. Stentz, a retired Forest Service mineral examiner, and in which Mr. Whipple participated, averaged total gold and silver values of $46.34 per ton. Mr. Johns' samples within the block averaged $97.23 per ton. When questioned as to the reasons for the significant variations in the values obtained by the samples, Mr. Newman stated that it could occur in the sample collecting procedure, in the assaying process, contamination of the samples intentionally or unintentionally after they were taken, and finally, and the most obvious, the natural variation in the metal content along the vein, either in a horizontal or vertical direction. (Tr. 269-70). Since none of the experts could fault the others' methods and since there is no way to determine from the evidence presented whether there was a variation in the assaying process or contamination of the samples, I can only find that the vein does vary considerably throughout its width in metal content and that, therefore, as Mr. Johns stated, the ore can be mined successfully, if at all, only through a careful selective process.

In his economic analysis, Mr. Newman used a smelter treatment charge of at least $20 a ton and, as basis for this estimate, referred to the bulk sample shipped to the smelter by the Mannixes in 1973, for which smelter charges of $20 per ton was deducted [sic] from the total payment. The evidence shows, however, that only a portion of the bulk sample was taken from Block 1. Mr. Johns' estimate of $10 per ton smelter charges was based on the high siliceous content of the samples taken by him and contact with Mr. Stan Lane at the East Helena Smelter, who informed him that the smelter charges would be $10 a ton.

Both Mr. Newman and Mr. Johns were in agreement as to a shipping charge of $6 to $8 per ton to the smelter. Where they disagreed completely was in the cost of extraction. Mr. Newman estimated the cost of mining at $70 per ton with direct labor costs of $2,520 per month of a miner at $8 per hour and a helper at $7 per hour, or union scale. There would also be costs of explosives, primers,

fuses, bits, timber, assaying and sampling. He also said that contract miners will take a job based on a unit of advance or a certain amount per foot and it now runs anywhere from $100 to $150 per foot of advance, with the contractors supplying all of the material needed.

Mr. Johns took a different approach and assumed that because of the high labor costs, the narrowness of the vein, and the necessity for careful selective mining, that the Mannix family would mine the ore themselves. He calculated that working on weekends or eight days per month underground at 7-1/2 tons per day production, they would produce 60 tons a month and the block would last for six months. He did not calculate the amount per hour received by the Mannixes for their work. However, if his figures are correct, and Mr. Mannix and his two sons worked a total of 144 eight-hour days, or a total of 1,152 hours with a net return of $23,744, their wages for their labor would be approximately $20 per hour. Even were one to assume that Mr. Johns' average values were high, that his smelter charges were low, that the selective mining process would not be entirely successful, and that the net profit might be halved, the Mannixes would be receiving as wages for their effort an hourly wage considerably higher than union scale.

I am inclined to accept Mr. Johns' economic analysis for two reasons. First, he has considerably more experience than the two Government experts in the practicalities and economics of mining. Second, his samples were taken entirely within Block 1, while not all of Mr. Newman's were taken within the block itself. The evidence does not show with preciseness where the Whipple-Stentz samples were taken, but it appears that the three samples showing the highest values, gold 0.5, .32 and .20 and silver 4.0, 16.7, and 2.2, were taken at the upper adit and along the raise and within Block 1. These samples are comparatively equal in values shown to the eight Johns' samples which averaged in content gold .367 and silver 7.47. The two Whipple-Stenz samples which showed much lower values were taken outside the block at the far end of the adit. (Tr. 69-70; Govt. Ex. 18).

Admittedly, Mr. Johns' analysis contains variables, and the Mannixes are not guaranteed a profit. They must mine selectively and with a minimum of dilution, but if they are successful and eliminate the lower value ore, their profit would be higher than as above calculated. In any event, the law does not require a guaranteed profit to constitute a discovery. The prudent man rule in Castle v. Womble, 19 L.D. 457 (1894), states that a discovery

exists where: '. . . minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine, . . .'

The many factors currently considered in determining the validity of a mining claim under the prudent man rule were enumerated recently by the Interior Board of Land Appeals:

> In order to meet [the prudent man test, the claimant] will have to show there is a likelihood that the minerals on the claims can be mined, removed and disposed of at a profit. Among the factors he must show for each claim by the probative evidence are:
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> (a) Expected costs of the extraction, beneficiation, and other essential costs of the operation necessary to mine and sell the mineral, including capital and labor costs;
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> (b) quantity of minable mineral on the claims;
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> (c) average grade or quality of mineral on the claim; and
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> (d) price at which the mineral will be sold and expected returns.
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> The above evidence should focus on current estimates of costs and prices. United States v. Howard S. McKenzie, 20 IBLA 38, 45 (April 17, 1975).
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> The total evidence presented in the present case covers the cost of extraction, transportation, smelting charges, quality of minable mineral, average grade or quality of mineral and the price at which the mineral can be sold. Taken as a whole, the evidence indicates a reasonable expectation of mining the ore contained upon the two claims at a profit.

The Government argues that the record does not support Judge Rampton's conclusion that there is a valuable mineral deposit present on both claims. Newman, a Government witness, testified that the claims are in an area on the Boulder batholith from which both gold and silver have been mined in large quantities in the past and

that gold, silver, and copper were shown in his assayed samples, although not in amounts which he considered to be economical to mine. He estimated there are reserves of about 800 tons of material in 5 discrete blocks on the claims, but he did not indicate which blocks are on which claim. He estimated the mineral material to have a value of about $18.05 per ton, much less than the smelting charges, and concluded that it would not be profitable to attempt to mine the deposits. Johns, a witness for the claimant, testified that Block 1 contained 372 tons of ore which he valued at $97.23 per ton, based on his assayed samples which showed values of $63.55 for gold and $33.68 for silver. Smelter returns, according to Johns, would theoretically bring a net smelter payment of $82.23 per ton, and after further deductions for transportation and general mining costs, contestees would net in excess of $23,000 from mining the entire block of 372 tons. 1/ We find, as did the Judge, that the preponderance of the evidence favors the claimant. Also we find no error in the weight given to the economic analysis by Johns over that presented by Newman.

[2] We would address the question of mining at a profit. The Government argues that all earlier expenses in development of the property must be considered, e.g., the cost of constructing cabins, sheds, and an access road and the purchase of rail and ore cars, and that such expenses must be recouped before it can be said that the mine is a profitable venture. We think the Government errs in its argument and analysis. Absent a prior withdrawal, if the mineral material may be now mined, removed, and marketed at a present profit over and above the costs of such operations, we would hold that the requirements of discovery have been met. There is no case law of which we have knowledge, nor has the Government adduced any, that compels consideration of the above mentioned development costs in determining if an ongoing operation is presently profitable. Cf. Andrus v. Shell Oil Co., 48 U.S.L.W. 4603, 4605 (U.S. June 2, 1980) (No. 78-1815).

[3] With respect to Judge Rampton's finding that the subject claims were improperly located, we note sua sponte that 30 U.S.C. § 23 (1976) provides that no lode claim shall exceed 300 feet on each side of the middle of the vein at the surface. There was no direct testimony as to the exact location of the outcropping of the vein of the Peggy Ann lode at the surface. Newman projected the outcrop to be some 70 to 80 feet from the center line of the claims so that one side line of the claims was more than 300 feet from the projected situs of the outcrop at the surface. Johns agreed that the vein structure dips at an angle other than perpendicular from the point of discovery. On this point the Department's regulations, since 1891, have held that "when the locator does not determine by exploration where the middle of the vein at the surface is, his discovery shaft must be assumed to

1/ Since the hearing both gold and silver have increased markedly in price. As a result of the rise in the price of these metals, the gross return to the contestee would be much greater than the sum calculated by Judge Rampton.

mark such point." 43 CFR 3841.4-3. A locator must assume that some place on the earth's surface represented the middle of the vein, and from such point he cannot exceed the statutory limit. Empire Milling and Mining Co. v. Tombstone Milling and Mining Co., 131 F. 339 (C.C. Conn. 1904). See also Campbell v. Ellet, 167 U.S. 116 (1897). Accordingly, we hold that in the absence of a discovery on a surface outcrop of a vein and in the absence of a clearly exposed vein at the surface of the ground, a projection vertically upward to the surface from the discovery points shown on the mineral survey of the Peggy Ann I and II lode mining claims is acceptable to identify the center line of the claims. The ruling of Judge Rampton to the contrary is vacated. 2/

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is affirmed as to the finding of discovery on the Peggy Ann I and the Peggy Ann II lode mining claims and vacated as to its holding relative to the dimensions of the claims and Mineral Survey 10940.

Douglas E. Henriques
Administrative Judge

We concur:

James L. Burski
Administrative Judge

Frederick Fishman
Administrative Judge

2/ The charge that the Mineral Survey 10940 was improperly executed suggests some technical inadequacy in the survey. MS 10940 was approved by the Chief of Cadastral Surveys, Montana State Office, Bureau of Land Management, to whom such authority had been properly delegated. The Chief also certified that the plat is strictly conformable to the field notes. A protest against alleged inadequacies of a mineral survey should be addressed to the Division of Cadastral Survey and not be included in a contest complaint against the validity of the mining claim. The complaint was addressed to the mining claimant and not to the mineral surveyor who executed the survey. The surveyor was not given an opportunity to reply to the charge. Judge Rampton should have dismissed, at the outset, the charge relating to the execution of the mineral survey. Indeed, BLM should not have included the charge against the mineral survey in the complaint originally.